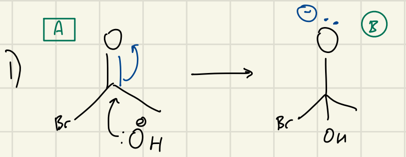
Electron sink is anything that:
1) first sucks in/stores electrons (and in doing so does some reaction)
2) then pushes those stored electrons back off (and in doing so can do another reaction)

Carbonyl e⊖ sink example

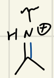
1)



suck in e⊖

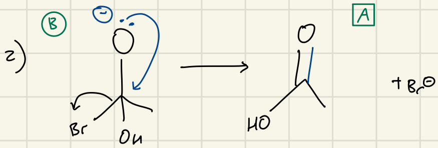
e⊖ storage state

imine can also be an e⊖ sink



in a similar manner

2)



e⊖ storage state

e⊖ pushed off

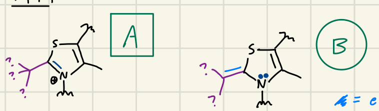
So there's a sucking in of electrons (step 1) which can do some chemistry (in this case, allowing -OH to attach)
And a pushing back off of electrons (step 2) which can do some more chemistry (in this case, allowing Br- to leave)

For any electron sink, there'll be an A intermediate that is ready to suck in more electrons
And a B intermediate that has the electrons (in blue) stored

Nature has her own even better electron sinks:

TPP:

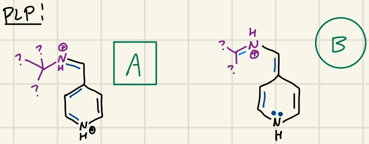
= substrate



= e⊖ stored/ready to push off

= rest of conjugated double bond system that helps suck/push e⊖ better

PLP:



These still have the two steps, an A intermediate ready to suck in electrons, and a B intermediate that has stored electrons ready to push out again, they're just slightly more complicated and longer conjugated double bond systems

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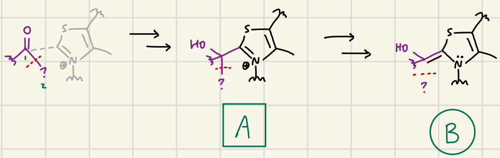
How do we know when to use TPP or PLP?

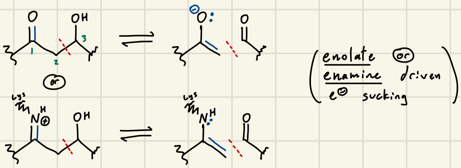
Electron sinks are very general. The first electron sucking step can be helpful for any chemistry or type of problem where electrons are taken away from something. The second electron pushing step can be helpful for any chemistry where electrons are pushed towards something.

For TPP in particular, the first step will often result in the bond right next to a carbonyl to break/form:

TPP attaches @ carbonyl usually



Which is different from aldolase:



For PLP in particular, the first step will often result in the bond right next to an amine-connected-carbon to break/form:

PLP attaches @ N